

Title (en)

Metal-to-metal seal assembly for oil and gas production apparatus

Title (de)

Metall auf Metall Dichtungsanordnung für Vorrichtung für die Produktion von Öl und Gas

Title (fr)

Ensemble d'étanchéité métal contre métal pour appareil de production de pétrole et de gaz

Publication

EP 0999339 A3 20010718 (EN)

Application

EP 99308660 A 19991101

Priority

US 18522098 A 19981103

Abstract (en)

[origin: EP0999339A2] A metal-to-metal seal assembly (100) provides a dynamic seal between a piston (110) and a cylinder. A first metal-to-metal seal (114) engages the outer diameter of the piston (110), while a second metal-to-metal seal (118) engages the inner diameter of the piston (110). The piston (110) is disposed between an inner mandrel (104) and an outer tubular member (106) that form an annular space (108) therebetween. The metal-to-metal seals form an interference fit against the mandrel (104) and tubular member (106). <IMAGE>

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IPC 8 full level

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CPC (source: EP US)

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Citation (search report)

- [X] US 5044672 A 19910903 - SKEELS HAROLD B [US], et al
- [XY] US 5685369 A 19971111 - ELLIS STEVEN C [GB], et al
- [X] EP 0461741 A2 19911218 - COOPER IND INC [US]
- [X] EP 0272771 A1 19880629 - CAMERON IRON WORKS INC [US]
- [X] US 4178020 A 19791211 - DOPYERA EMIL E [US]
- [Y] US 5662341 A 19970902 - EZELL MICHAEL DALE [US], et al
- [A] US 4749043 A 19880607 - RODENBERGER C MARK [US]
- [A] EP 0290113 A2 19881109 - CAMERON IRON WORKS INC [US]
- [A] GB 2265645 A 19931006 - OTIS ENG CO [US]
- [A] GB 2180903 A 19870408 - VETCO OFFSHORE IND INC
- [A] GB 2193540 A 19880210 - NAT SUPPLY CO
- [A] EP 0622520 A1 19941102 - COOPER IND INC [US]

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